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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie R. Salas
Secretary
Federal Communications Commission
Room 222
1919 M St., N.W.
Washington, D.C. 20554

RE: Second Application by BellSouth to provide In-region, InterLATA Services in Louisiana, CC Docket No. 98-121

Dear Ms. Salas:

Please accept the attached Corrected Copy of the Comments of the Competition Policy Institute in the above-captioned proceeding. CPI timely filed its original version of these comments yesterday, August 4, 1998. The Corrected Copy makes a few corrections to errors inadvertently included in the original Comments and includes other minor editorial changes between pages 16 and 22. CPI regrets the need to make these changes but assures the Commission that these revisions do not alter the arguments or conclusions stated in the original filing.

The Corrected Copy version of these comments is being served today on all parties of record, so there will be no harm or prejudice caused to any party in this proceeding from the Commission's grant of this request.

Respectfully Submitted,

John Windhausen, Jr.

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General Counsel

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

CORRECTED COPY

In the Matter of Second Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana	)	CC Docket No. 98-121

COMMENTS OF THE

COMPETITION POLICY INSTITUTE

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August 4, 1998

SUMMARY

As in its earlier comments on BOC applications under section 271, CPI focuses these comments on the public interest test. Last month, CPI, along with several other consumer organizations, filed a petition for declaratory rulings asking the FCC to adopt a consumer perspective when enforcing the public interest test. We proposed that the FCC should implement the public interest test, in most cases, by declaring that residential and business consumers should have a "realistic choice" of an alternative local telephone carrier before the BOC is permitted to enter the interLATA market.

In this second Louisiana application, BellSouth has not demonstrated that consumers have such a choice. BellSouth shows that competitors have won about 2% of the market in Louisiana. It is impossible to extrapolate from this limited amount of evidence how many consumers have a realistic choice of competing carriers. BellSouth also presents a number of secondary indicia of the growth of competition, such as "collocation activity", ported telephone numbers, NNX codes, interconnection trunks, etc. as evidence of the growth of competition. These factors, however, do not demonstrate that carriers are able to take orders from consumers. At most, this evidence demonstrates that carriers are assembling their networks in preparation to offer service, not that they are actually offering service.

Further, the Personal Communications Services (PCS) that BellSouth relies upon to demonstrate local competition do not provide a "realistic" choice for the vast majority of Louisiana consumers. The survey on which BellSouth relies uses an

extremely small and non-random sample size that limits the survey's usefulness. Further, the survey shows that, while a small percentage of *PCS customers* use their PCS telephones as a substitute for wireline telephones, a *minuscule* of percentage of *all telephone customers* uses PCS as such a substitute. Thus, even if the survey accurately represents the preferences of PCS consumers, which it may or may not, the survey evidence does not demonstrate that PCS provides a significant number of consumers with a realistic choice of an alternative carrier for local telephone service.

Because BellSouth has not shown that consumers have a realistic choice of an alternative carrier, its application must be presumed to fail the public interest test. As we discuss in our petition, we believe BellSouth could overcome this presumption if it presents especially convincing arguments that its application would benefit the public even if consumers do not have a realistic choice. BellSouth's application, however, does not meet this burden.

BellSouth argues that granting its application will provide a number of consumer benefits, such as one-stop shopping and lower prices for long distance service. Some of these benefits are likely to be real. But consumers are only likely to benefit if they can obtain one-stop shopping from several carriers. And BellSouth's commitment to offer initial basic prices that are 5% lower than AT&T's is similar to the price discounts offered by most other AT&T competitors. Further, BellSouth ignores the potential harm to competition in the local market that could result if BellSouth's application is granted prematurely.

Because BellSouth has not met its burden of showing that the application is consistent with the public interest, the application should be denied.

COMMENTS OF THE COMPETITION POLICY INSTITUTE

I. INTRODUCTION

The Competition Policy Institute (CPI)[1] respectfully submits these initial comments on the second Application by BellSouth Telecommunications, Inc., et al., (BellSouth) to provide in-region, interLATA services in Louisiana. Because BellSouth has not demonstrated that its application is consistent with the public interest, convenience and necessity, its application should be denied.

Last month, CPI joined with the American Association of Retired Persons, and consumer advocates from the states of California, Iowa, Maine and South Carolina in filing a Petition for Declaratory Rulings concerning the public interest standard for Bell Operating Company (BOC) applications under section 271 of the Communications Act.[2] In that petition, we urge the FCC to approach the public interest test from the perspective of residential and business consumers. In particular, we proposed that the FCC establish a presumption either for or against each BOC application under the public interest test depending upon whether residential and business consumers have a "realistic choice" of a carrier other than

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[1] CPI is an independent, non-profit organization that advocates state and federal policies to promote competition in telecommunications and energy services in ways that benefit consumers. Complete information about CPI can be obtained from our web site at <www.cpi.org>.

[2] *See*, Pleading Cycle Established for Comments on Petition by the Competition policy institute for Declaratory rulings on the Realistic Choice Standard for Implementing the Public Interest Test in Section 271 of the Communications Act, CCBPol. 98-4, released July 22, 1998, DA 98-1467.

the BOC for local telephone service. If consumers do not have a realistic choice, the Petition suggests that the BOC should bear a particularly heavy burden to overcome the presumption by presenting evidence of consumer benefits that is especially convincing.

BellSouth has not demonstrated that consumers in Louisiana have a realistic choice of an unaffiliated, competing carrier for local telephone service. At most, BellSouth has demonstrated that a handful of subscribers have subscribed to competitive providers of local service. The number of consumers that have a competitive alternative does not come close to meeting the scale that would be sufficient to demonstrate that the local market is open and that consumers are likely to benefit from entry of the BOC into the long distance market.

Notwithstanding the lack of realistic choice, BellSouth presents several arguments in support of its claim that the application meets the public interest test. Some of these arguments have merit and are worthy of consideration. For the most part, however, BellSouth exaggerates the expected consumer benefits that are likely to arise from grant of its application. These benefits, both real and claimed, are not sufficient to overcome the presumption against the application that results from the lack of a realistic choice for consumers.

These comments are divided into two parts. First, the application will review the evidence submitted by BellSouth and will conclude that this evidence is insufficient to find that consumers have a realistic choice in Louisiana. Second, the application will review the purported consumer benefits of BellSouth's application and will conclude that these benefits are not sufficient to outweigh the presumption against the application.

II. BELLSOUTH'S APPLICATION DOES NOT DEMONSTRATE THAT RESIDENTIAL AND BUSINESS CONSUMERS IN LOUISIANA HAVE A REALISTIC CHOICE OF COMPETING CARRIERS.

A. BellSouth misstates the scope of the public interest inquiry.

BellSouth presents a meager amount of information concerning the availability of competitive alternatives to residential and business consumers in its application. In part, this may result from BellSouth's belief that the Commission is not entitled to examine the competitiveness of the local market in evaluating the public interest test. BellSouth argues that the Commission "may not use the public interest inquiry to add local competition criteria beyond those that Congress included in the checklist."[3] BellSouth instead maintains that

> The point of the public interest test is to allow the Commission to examine the effect on competition of Bell company entry into the interLATA market. The principal focus of the inquiry must be the market where the effects of Bell company entry would directly be felt: the interLATA market. It cannot be the local market, for issues related solely to local competition are conclusively determined by compliance with the competitive checklist.[4]

The Commission has already rejected this argument. In its order denying the application of Ameritech to provide in-region, interLATA service in Michigan, the

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[3] BellSouth Brief in Support of its Application, pp. 73-74.

[4] BellSouth Brief in Support of its Application, p. 75.

FCC expressly disagreed with the argument that its public interest authority was limited to examining the long distance market. The Commission noted that the public interest inquiry gave the Commission broad authority to exercise its expert judgment, and it noted that the overriding goal of the 1996 Act was "to open all telecommunications markets to competition."[5] The Commission thus concluded that its public inquiry "should focus on the status of market-opening measures in the relevant local exchange market."[6] In doing so, the Commission "reject[ed] the view that our responsibility to evaluate public interest concerns is limited narrowly to assessing whether BOC entry would enhance competition in the long distance market."[7]

There is no reason for the Commission to stray from this conclusion. While Congress certainly intended to "open all markets to competition", there was no question that the market least open to competitive entry, and the market on which Congress spent the most effort to address, was the local exchange market. At the time of the Act, almost every market was open to competition except for the local telephone market. For this reason, several members of Congress stated that

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5 In the Matter of Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in Michigan, *Memorandum Opinion and Order*, CC Docket No. 97-137, August 19, 1997, FCC 97-298. ("*Ameritech Order*"), para. 386.

6 *Ameritech Order*, para. 385.

7 *Ameritech Order*, para. 386.

opening the local market was the primary objective of passing the Telecommunications Act of 1996.[8] Sections 251, 252 and 253 are all intended to open the local market to competition.

Although competition in the long distance market is certainly one factor that affects consumers, there is no reason for the Commission's public interest analysis to ignore the impact of the application on consumers across all markets. In fact, BellSouth's own public interest analysis is not limited to considering the impact of competition in the long distance market.[9] The FCC thus adopted the correct view when it determined that it would use the public interest test to examine the openness of the local telephone market.

Further, it is difficult to understand the meaning of BellSouth's argument. Even if the FCC were to focus solely on the effect of the application on competition in the interLATA market, that analysis would still have to take into account whether the BOC could unfairly take advantage of market power in other markets, such as the local exchange market, to gain an anticompetitive advantage in the long distance market. Thus, even under BellSouth's preferred reading of the public

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8 *See*, Statement of Senator Kerrey, 141 Cong. Rec. S7970 (June 8, 1995) ("This [public interest test] is an effort to make certain that in fact we do get competition at the local level."); Statement of Senator Dorgan, 141 Cong. Rec. S8464 (June 15, 1995) ("The fundamental policy goal confronting the Congress as we develop telecommunications reform legislation is how do we employ competition in markets which are currently controlled by regulated monopolies, such as the local exchange.")

9 See, BellSouth Brief, Section IV.E. ("The Effect of BellSouth's Entry on Local Competition"), p. 105.

interest test, the FCC would be fully authorized to examine the competitiveness of the local exchange market.

Perhaps the biggest flaw in BellSouth's proposed view of the public interest standard, however, is its failure to recognize the need to examine the effect of the application on residential and business consumers. Rather than focusing on markets, the Commission should instead focus on residential and business consumers. After all, the essential purpose of the 1996 Act is to ensure that consumers benefit from greater competition in all markets.

In short, there is no reason for the Commission to depart from its *Ameritech Order* and adopt the BellSouth proposal to limit the FCC's public interest examination to the effects on the long distance market. The FCC should instead focus its public interest inquiry on the effect of the application on residential and business consumers.

B. BellSouth presents little information concerning whether residential and business consumers have a realistic choice of alternative carriers.

BellSouth presents no information concerning the availability of competing carriers to business and residential consumers in its public interest discussion. The only information that relates to whether consumers have a realistic choice appears in the portion of BellSouth's Brief that discusses whether it meets the requirements of Track A and in the Affidavit of Gary Wright. From this limited amount of information concerning the operations of competing carriers, it is impossible to determine whether or not residential and business consumers have a realistic choice.

BellSouth maintains that the local exchange market is competitive. Its brief quotes Mr. Wright as saying that "[t]he vigorous competition currently evidenced in Louisiana's local exchange market is economically viable, rapidly expanding, and irreversible."[10] BellSouth claims that facilities-based carriers and resellers have won almost 48,300 "wired lines" in Louisiana, representing more than 700 percent increase since the fall of 1997.[11]

The information to buttress this conclusion is scattered throughout Mr. Wright's affidavit. The following chart attempts to summarize this information concerning the market share of competitors in Louisiana:

10 BellSouth Brief, p.3, quoting Wright Public Aff. Para. 4.

11 BellSouth Brief, Summary, p.ii.

		Business	Residential	Total
A	Total Number of Lines Served by BellSouth in Louisiana (Aff. Para. 61)	650,000	1.6 million	2.25 million
B	Total Number of Lines Served by Facilities-based CLECs over their Own Facilities	["overwhel-mingly business"][12]	["less than 10"][13]	4,282
C	Total Number of Lines Served by 6 Facilities-based CLECs Using Supplemental Resale (Aff. Para. 57)	11,796	248	12,044
D	Total Number of Lines Served by 7 other CLECs Using Resale while they develop their own Facilities (Aff. Para. 57)	1,965	375	2,340
E	Lines Served by 18 Resale-only Carriers (Aff. Para. 60)	775	28,734	29,509
F	Total Lines Served by all CLECs - Facilities and Resale (Add B,C,D,E)	18,818	29,357	48,175
	Market Share of all CLECs of All Telephone Lines.	2.8%	1.5%	2.1%
	PCS subscribers			35,000

The above information suggests that competitors have approximately 2.1% of the local exchange market in Louisiana (not including PCS, which is discussed below). Of course this information does not determine whether consumers have a realistic choice of an alternate carrier. As described in our petition, the realistic

12 Wright Aff. Para. 32.

13 Wright Aff. Para. 66.

choice approach does not measure market share; it measures whether or not consumers could, if they desired, choose to subscribe to an alternative carrier.

Nevertheless, it might be possible to extrapolate to some extent from market share information to make an estimate as to how many consumers have a competitor available to them. But without knowing the ratio of customers that could choose to subscribe to a competitor to the customers who actually have subscribed to a competitor, it is extremely difficult for the Commission to determine how many consumers have a realistic choice simply by examining market share information.

The Wright affidavit also provides information concerning the percentage of central offices in which competitors have collocated. Wright estimates that BellSouth "experienc[es] collocation activity" out of 12 central offices, which serve 19% of residential lines and 39% of business lines. Wright estimates from this information that "CLECs can directly connect approximately 310,000 current [BellSouth] residential lines and 260,000 current [BellSouth business lines] to their switching facilities."

Mr. Wright assumes that "collocation activity" allows a competitor to provide service to all the customers served by that central office. This assumption is dubious. First, it is unclear what is meant by "collocation activity". Second, in its comments on the Ameritech-Michigan application, the Department of Justice (DOJ) explained that collocation does not automatically mean that all the customers served by that central office are available to competitors:

> Ameritech asserts that current market share data understate the competitive significance of CLECs because the existing facilities in Michigan, including the number of collocations in Ameritech end offices, indicate that a large share of Ameritech's customers are already "addressable" by competitors. According to Ameritech, this means that the local market is already sufficiently open to provide meaningful competitive pressure on the BOC. [citations omitted] Ameritech's affiants argue that collocation in an Ameritech end office gives the collocator the ability to compete for every access line served by that end office, [Citation omitted], and based on this assertion, they claim that by the end of July competitors will be collocated in central offices that serve 42% of Ameritech Michigan's business lines (768,269 lines) and 29% of Ameritech Michigan's residential lines (948,221 lines).
>
> Ameritech's "addressable market" argument assumes that CLECs have the "capacity to serve" all access lines served by collocated offices. [Citations omitted] But capacity in this context is dependent not only on the capabilities of the CLECs, but also on the ability of Ameritech to provision unbundled loops in the collocated offices. Ameritech has not yet sufficiently demonstrated its ability to do so reliably and in significant volumes. In short, to establish that a large portion of the market is "addressable," Ameritech must first demonstrate that its processes for provisioning unbundled loops are reliable and scalable to levels substantially greater than current demand. . . . Thus, the analysis in Part III and Appendix A shows that Ameritech's systems have not yet been proven to be able to meet the levels of customer demand that Ameritech's affiants assume in claiming that the Michigan local markets are "addressable."[14]

As this discussion demonstrates, even after a competitor has collocated in the central office, the ability of the CLEC to provide competitive service depends additionally on a number of factors, including the BOC's ability to provide unbundled loops, the ability to provide nondiscriminatory OSS on a significant scale, and other factors.

BellSouth does not demonstrate that competitors who have collocated are

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[14] Evaluation of the United States Department of Justice of the Application by Ameritech-Michigan, CC Docket No. 97-137, pp. 37-38, June 25, 1997.

able to obtain unbundled loops in sufficient quantities to be able to serve that market. In fact, the actual number of unbundled loops in service is extremely small: according to Mr. Wright, "CLECs had requested and placed in service approximately 100 unbundled network loops in Louisiana."[15] This information seriously undermines BellSouth's argument that the "collocation activity" in 12 central offices is sufficient to demonstrate the openness of the local market. In fact, the information on the use of unbundled loops supports the conclusion that consumers in Louisiana do not have a "realistic choice" of a competitive local exchange carrier.

The Wright affidavit further points to the ported telephone numbers as evidence of competition. But the evidence is paltry. "As of June 1, 1998, 4 wireline facilities-based CLECs had ported approximately 1,536 business telephone numbers networks [sic] and 1 residential telephone number from [BellSouth's] Louisiana network to their own CLEC network."[16] Mr. Wright attempts to explain that these numbers underestimate the total number of lines served by competitors: "For business customers a single ported business number may represent one plain old business line (POTS line, 1FB, etc.) or it may represent a group of hundreds of local

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[15] Wright Aff., Para. 41. To be clear, the small number of in-service unbundled loops in Louisiana does not prove that there is no local competition in Louisiana, because competitors might still provide competitive service using their own facilities or using resale. Mr. Wright does not provide sufficient information, however, to determine whether consumers have a choice of carriers using any of these three methods.

[16] Wright Aff., Para 46.

exchange trunks in a rotary hunt group served by one lead number."[17] Mr. Wright does not, however, provide evidence of the expected ratio of ported lines to actual lines served, so it is impossible to extrapolate from the number of ported lines to estimate the number of lines actually served by competitors. Even if this ratio were included, however, it would only demonstrate the actual number of lines served by competitors (information that has already been discussed above). The more important information for purposes of the realistic choice standard is how many consumers have a competitor available to them, not how many consumers are actually being served by a competitor.

The Wright affidavit also attempts to point to other indicia of competitive activity, such as the number of NXX codes assigned to CLECs, the number of local interconnection trunks that facilities-based LECs have ordered and placed in service, directory listings, access to poles, ducts, and conduit, and access to operator services, directory assistance services, and E911 services. These factors, however, do not demonstrate that carriers are able to take orders from consumers. At most, this evidence demonstrates that carriers are assembling their networks in preparation to offer service, not that they are actually offering service.

In fact, other sections of Mr. Wright's affidavit confirm that competitors are still in the process of establishing their competitive networks. For instance, he

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[17] Wright Aff., Para. 45.

acknowledges that "[a]ll 6 of the currently active wireline facilities-based CLECs are in the early stages of their respective facilities-based market entry in the Louisiana market."[18] Further, he states:

> Collectively Louisiana's facilities-based CLECs have operational facilities, or planned facilities under development, capable of addressing approximately 75% of the business local exchange lines and over 50% of the residential local exchange lines in BST's Louisiana serving area. When combined with the local exchange service capabilities of CLECs currently providing resold local exchange services in Louisiana, the Louisiana CLEC industry clearly possesses the capability, if not the desire, to compete for every single local exchange line currently provided by BST within the state of Louisiana.

Mr. Wright's conclusion does not fit the facts that he presents. Mr. Wright tells us that the CLECs have operational "or planned facilities under development" capable of serving 75% of the business market and 50% of the residential market. Obviously, a CLEC cannot "clearly possess the capability" to provide competitive service today using "planned facilities" that have not yet been deployed. By failing to distinguish between facilities that are actually deployed and facilities that are being planned, Mr. Wright cannot establish that the local market in Louisiana is competitive.

Mr. Wright demonstrates his bias when he parrots the argument of the Bell Companies that competitors have the "capability, if not the desire," to provide competitive service. This allusion to the BellSouth's argument that CLECs are "holding back" on their competitive entry is betrayed by Mr. Wright's own

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18 Wright Aff., Para. 54.

information. Why would a competitor build facilities serving 75% of the business market and 50% of the residential market if it intended to hold back on actually providing service? It seems more likely that competitors are in the process of building facilities to offer competitive service in Louisiana but have not yet completed all the activity that is necessary to offering and providing competitive service.

Further, the Wright affidavit makes little effort to identify the distribution of consumers who have subscribed to competitors' service offerings, other than to distinguish between business and residential users. For instance, no information is provided concerning the types of the consumers (large business, small business) who have subscribed to CLECs, the geographic location of residential consumers (rural, suburban or urban), the income levels of residential customers (high, middle or low), and types of living arrangements (single-family homes or apartment buildings). As CPI has previously suggested in its comments on earlier BOC applications, each BOC should submit information about each category of consumer to the FCC in order for the FCC to be able to determine whether the BOC meets the realistic choice standard.

BellSouth fails even to provide the information that the FCC requested. In its Ameritech Order, the FCC stated,

> The most probative evidence that all entry strategies are available would be that new entrants are actually offering competitive local telecommunications services to different classes of customers (residential and business) through a

> variety of arrangements (that is, through resale, unbundled elements, interconnection with the incumbent's network, or some combination thereof), in different geographic regions (urban, suburban, and rural) in the relevant state, and at different scales of operation (small and large).[19]

While BellSouth has offered information concerning the classes of customers (residential and business) and the types of arrangement (resale, unbundled elements and interconnection), BellSouth has largely failed to provide information concerning the geographic regions and the scales of operation of the competitors.

The only discussion of the geographic concentration of the competitors' activities is purely conclusory and confusing. For instance, Mr. Wright states

> While local competition continues to flourish in almost every area of Louisiana where business and residential customers are concentrated, the three metropolitan markets of New Orleans, Baton Rouge, and Shreveport are clearly the initial focal points of competitive local market entry, particularly for wireline and wireless facilities-based CLECs. Nevertheless, other metropolitan areas such as Lake Charles and Lafayette are already witnessing the buildout of competitive facilities-based CLEC networks.[20]

It is difficult to comprehend how competitors can be focusing on three cities for their "*initial*" entry, while at the same time competition "continues to *flourish*" in almost every area where customers are concentrated. Further, if competitors are now building out facilities in Lake Charles and Lafayette, it seems unlikely that CLECs are actually offering consumers a realistic choice of competitive service in these cities, much less in non-metropolitan areas of the state.

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[19] Ameritech Order, Para. 391.

[20] Wright Aff. Para. 64.

In conclusion, neither the BellSouth Brief nor the Affidavit from Mr. Wright demonstrate that a sufficient number or range of consumers in Louisiana have a "realistic choice" of an alternative local telephone provider. At most, the Brief and the Wright Affidavit suggest that competitors are beginning to enter the market and that they have acquired about 2% of the market, including by resale, unbundled elements and separate facilities. Therefore, the BellSouth application should be presumed to fail the public interest test unless BellSouth can demonstrate with especially convincing evidence that its application would serve the interests of residential and business consumers.

C. BellSouth's Evidence Concerning PCS Cannot Be Relied Upon To Conclude that PCS Offers A Competitive Option to Wireline Service.

A major feature of the BellSouth application is its discussion of the significance of consumer purchases of wireless personal communications service (PCS). BellSouth presents evidence about the extent of consumer demand for PCS for three major reasons: 1) to justify the Company's assertion that the threshold requirements of Track A are met; 2) to demonstrate that BellSouth's wireline services face a significant competitor in PCS at the present time; and 3) to convey the general sense that local exchange competition is rampant in Louisiana. In support of these contentions, BellSouth presents the results of a survey of PCS subscribers by M/A/R/C, a public opinion polling firm. The survey reports some provocative results, allowing BellSouth to claim "[a]ll of this only confirms that, in

Louisiana, PCS service is an 'actual commercial alternative' to wireline service for a substantial number of customers today." [21] However, a close examination of the M/A/R/C study shows that it contains some substantial methodological deficiencies that severely constrain the use of the results and limit the conclusions that can be drawn from the survey.

The first methodological limit on the survey concerns the manner in which the sample was obtained. In order to contact PCS subscribers, M/A/R/C ran advertisements in two newspapers in New Orleans inviting PCS subscribers to participate in a survey. M/A/R/C paid respondents $5.00 for completing the initial telephone survey and $30.00 for participating in a second "conversational" interview that was less structured than the initial telephone survey.[22] The survey firm conducted 202 initial interviews and compiled the results in tabular form reported in the study filed with the Commission.

Modern statistics allows us to draw conclusions about a large population on the basis of research on a relatively smaller sample population. But statistics, to be satisfied, has some very specific requirements. In order to use the machinery of statistics to draw valid conclusions about a general population on the basis of information collected about a sample population, it is essential that a sample be a

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[21] BellSouth Brief, p. 14.

[22] "Louisiana PCS Study" prepared by M/A/R/C, April 1998, filed with affidavit of William C. Denk, page 24.

random sample.

There is absolutely no reason to think that the callers responding to the M/A/R/C newspaper ads constitute a random sample of the population of PCS consumers in New Orleans (or Louisiana). The sample is obviously self-selecting: these are newspaper readers who are motivated to call a telephone number and respond to a poll. The pollsters cannot know the important ways in which these respondents differ from the general PCS user population. The respondents may be wealthier (or poorer) than average PCS subscribers; travel more (or less) than average; use the telephone more (or less) than average; be more (or less) dependent on wireless telephones for their livelihood; be more (or less) likely to have a family; and, most important, more (or less) inclined to substitute PCS for wireline service. Any or all of these differences between the sample and the population universe could substantially bias the sample in ways that make extrapolations from the interviews unreliable.

M/A/R/C's technique is akin to asking questions of "random" shoppers in a mall and then concluding that the sample of mall shoppers represents the general population.

It is instructive to contrast this sampling technique with one that would have produced a more nearly random sample. Instead of allowing subscribers to self-select, M/A/R/C might have obtained a list of all NXX's assigned to PCS carriers in

New Orleans, used a random digit generator to select random PCS phone numbers, called the chosen subscribers, protected the randomness by employing multiple follow-up attempts to reach selected callers and possibly adjusted the results for the reported on-air time of PCS subscribers. In this way, a sample could have been constructed that avoids the biases likely to be built into the M/A/R/C methodology.

This sampling problem is not merely bothersome, it is fatal. In order to speak sensibly, in a statistical sense, about the relationship between a sample and the general population, it must be possible to assume that repeated sampling of the population results in a distribution of responses that produces a "normal" distribution of errors about the population parameters being estimated. But because the M/A/R/C sample is not random, it is not possible to make that assumption and therefore impossible to extrapolate the findings from these 202 interviewees to the general population of 35,000 PCS users. This does not mean that the responses collected by M/A/R/C are meaningless: the summary tables and pie charts in the study probably describe the *sample* accurately; it is simply incorrect to assume they describe the *universe* of PCS subscribers.

The second limitation on the survey method is the size of the sample itself. Even if the randomness violation could be overcome, the small sample size means that the "margin of error" accompanying the results will be unacceptably large. It is well known that the reliability of estimates in surveys varies with the square root of the sample size. That is why surveys measuring voter or consumer response often use samples of 1000 or more. The M/A/R/C survey completed only 202 primary interviews in the Louisiana PCS Study. Further, the M/A/R/C study breaks with tradition by not stating the confidence interval surrounding the estimates provided in the study. However, based on a *random* sample of 202, CPI calculates that the 95% confidence interval ("margin of error") about the estimates varies from about ± 3 percent to ± 7 percent. These are very large intervals when the proportions being estimated are in the range of 5 to 26 percent themselves.

The small initial sample size becomes especially important when M/A/R/C begins subdividing the group into smaller subgroups. The report imbues the raw numbers with some apparent authority by stating them in percentage terms. Thus we have the conclusion, highlighted in BellSouth's brief, that "6 percent (10 percent of business users and 4 percent of personal users) of PCS customers in Louisiana subscribed to their PCS service instead of a wireline offering." This survey conclusion is much less convincing when we strip away the percentages: the report was actually talking about **9 business users and 4 personal users.** Similarly, in chart 4a of the M/A/R/C report, "23%" of customers actually means **only 3 customers**; and "8%" refers to a **single customer**.[23] It obviously makes common sense, as well as statistical sense, that one should not extrapolate such small, non-

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23 Louisiana PCS Study, p. 9.